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**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. 554922009200 Total Pages 893

First Named Inventor or Application Identifier

William R. PATTERSON

Express Mail Label No.

ER 451350810 US

**APPLICATION ELEMENTS**

See MPEP chapters 600 concerning utility patent application contents.

Address to:

Commissioner for Patents  
P.O. Box 1450Mail Stop PATENT APPLICATION  
Alexandria, VA 22313-1450

1. ☒ Fee Transmittal Form (1 pages)  
(Submit an original, and a duplicate for fee processing)
2. ☐ Applicant claims Small Entity status, see 37 C.F.R. § 1.27
3. ☒ Specification [Total Pages 74]  
(preferred arrangement set forth below, MPEP 1503.01)  
- Descriptive title of the Invention  
- Cross Reference to Related Applications  
- Statement Regarding Fed sponsored R&D  
- Reference to Microfiche Appendix  
- Background of the Invention  
- Brief Summary of the Invention  
- Brief Description of the Drawings (if filed)  
- Detailed Description of the Invention (including drawings, if filed)  
- Claim(s)  
- Abstract of the Disclosure
4. ☒ Drawing(s) (35 USC 113) [Total Sheets 8]
5. ☐ Oath or Declaration [Total Sheets ]  
a. ☐ Newly executed (original or copy)  
b. ☐ Copy from a prior application (37 CFR 1.63(d))  
(for continuation/divisional with Box 18 completed)  
i. ☐ DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☒ Application Data Sheet. See 37 CFR 1.76 (4 pages)
7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. ☐ Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)  
a. ☐ Computer Readable Form (CRF)  
b. ☐ Specification Sequence Listing on:  
i. ☐ CD-ROM or CD-R (2 copies); or  
ii. ☐ paper (5 pages)  
c. ☐ Statement verifying identity of above copies (2 pages)

**ACCOMPANYING APPLICATION PARTS**

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(i). Applicant must attach form PTO/SB/35 or it's equivalent
17. ☐ Other:

**18. If a CONTINUING APPLICATION, check appropriate box and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:**☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) | of prior application No. filed

Prior application information:

Examiner:

Group Art Unit:

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**☒ Customer Number

38706

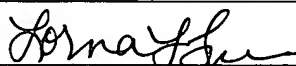
Insert Customer No.

or ☐ Correspondence address belowFirm  
or  
Individual Name

SWISS LAW GROUP

Lorna L. Tanner (Reg. No. 30,113)

Signature



Date

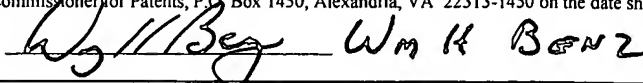
February 26, 2004

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Box Patent Application, Washington, DC 20231.

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail Label No. ER 451350810 US in an envelope addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Dated: February 26, 2004

Signature:



022704

14230 U.S. PTO

PTO/SB/17 (01-03)

Approved for use through 04/30/2003. OMB 0651-0032

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<h2 style="margin: 0;">FEE TRANSMITTAL</h2> <h3 style="margin: 0;">for FY 2003</h3> <p style="margin: 0; font-size: small;">Patent fees are subject to annual revision.</p>		<b>Complete if Known</b>																																																																																																																																																																																																																																																																																											
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"><input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27</div> <div style="display: flex; justify-content: space-between;"><div><b>TOTAL AMOUNT OF PAYMENT</b></div><div><b>(\$)</b> 1,378.00</div></div>		<b>Application Number</b>	Not Yet Assigned																																																																																																																																																																																																																																																																																										
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<div style="display: flex; justify-content: space-between;"><div style="width: 45%;"><b>METHOD OF PAYMENT</b> (check all that apply)<div style="margin-top: 5px;"><input type="checkbox"/> Check   <input type="checkbox"/> Credit Card   <input type="checkbox"/> Money Order   <input type="checkbox"/> Other   <input checked="" type="checkbox"/> None</div><div style="margin-top: 5px;"><input type="checkbox"/> Deposit Account</div><div style="margin-top: 5px;">Deposit Account Number <span style="border: 1px solid black; display: inline-block; width: 150px; height: 1.2em; vertical-align: middle;"></span></div><div style="margin-top: 5px;">Deposit Account Name <span style="border: 1px solid black; display: inline-block; width: 150px; height: 1.2em; vertical-align: middle;"></span></div><div style="margin-top: 5px;"><b>The Commissioner is hereby authorized to:</b> (check all that apply)<div style="display: flex; justify-content: space-between; margin-top: 5px;"><div><input type="checkbox"/> Charge fee(s) indicated below</div><div><input type="checkbox"/> Credit any overpayments</div></div><div style="margin-top: 5px;"><input type="checkbox"/> Charge any additional fee(s) during the pendency of this application</div><div style="margin-top: 5px;"><input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.</div></div></div><div style="width: 50%;"><b>FEE CALCULATION</b><div style="margin-top: 5px;"><b>1. BASIC FILING FEE</b></div><table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"><thead><tr><th colspan="2">Large Entity</th><th colspan="2">Small Entity</th><th rowspan="2">Fee Description</th><th rowspan="2">Fee Paid</th></tr><tr><th>Fee Code</th><th>Fee (\$)</th><th>Fee Code</th><th>Fee (\$)</th></tr></thead><tbody><tr><td>1001</td><td>770</td><td>2001</td><td>385</td><td>Utility filing fee</td><td>770.00</td></tr><tr><td>1002</td><td>340</td><td>2002</td><td>170</td><td>Design filing fee</td><td></td></tr><tr><td>1003</td><td>530</td><td>2003</td><td>265</td><td>Plant filing fee</td><td></td></tr><tr><td>1004</td><td>770</td><td>2004</td><td>385</td><td>Reissue filing fee</td><td></td></tr><tr><td>1005</td><td>160</td><td>2005</td><td>80</td><td>Provisional filing fee</td><td></td></tr><tr><td colspan="5" style="text-align: right;"><b>SUBTOTAL (1)</b></td><td><b>(\$)</b> 770.00</td></tr></tbody></table><div style="margin-top: 5px;"><b>2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE</b></div><table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"><thead><tr><th colspan="2">Large Entity</th><th colspan="2">Small Entity</th><th rowspan="2">Fee Description</th><th rowspan="2">Fee Paid</th></tr><tr><th>Fee Code</th><th>Fee (\$)</th><th>Fee Code</th><th>Fee (\$)</th></tr></thead><tbody><tr><td>1202</td><td>18</td><td>2202</td><td>9</td><td>Claims in excess of 20</td><td></td></tr><tr><td>1201</td><td>86</td><td>2201</td><td>43</td><td>Independent claims in excess of 3</td><td></td></tr><tr><td>1203</td><td>290</td><td>2203</td><td>145</td><td>Multiple dependent claim, if not paid</td><td></td></tr><tr><td>1204</td><td>86</td><td>2204</td><td>43</td><td>** Reissue independent claims over original patent</td><td></td></tr><tr><td>1205</td><td>18</td><td>2205</td><td>9</td><td>** Reissue claims in excess of 20 and over original patent</td><td></td></tr><tr><td colspan="5" style="text-align: right;"><b>SUBTOTAL (2)</b></td><td><b>(\$)</b> 608.00</td></tr></tbody></table><p style="font-size: x-small; margin-top: 5px;">**or number previously paid, if greater; For Reissues, see above</p></div></div> <div style="width: 45%;"><b>3. ADDITIONAL FEES</b><table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"><thead><tr><th colspan="2">Large Entity</th><th colspan="2">Small Entity</th><th rowspan="2">Fee Description</th><th rowspan="2">Fee Paid</th></tr><tr><th>Fee Code</th><th>Fee (\$)</th><th>Fee Code</th><th>Fee (\$)</th></tr></thead><tbody><tr><td>1051</td><td>130</td><td>2051</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr><tr><td>1052</td><td>50</td><td>2052</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr><tr><td>1053</td><td>130</td><td>1053</td><td>130</td><td>Non-English specification</td><td></td></tr><tr><td>1812</td><td>2,520</td><td>1812</td><td>2,520</td><td>For filing a request for <i>ex parte</i> reexamination</td><td></td></tr><tr><td>1804</td><td>920*</td><td>1804</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr><tr><td>1805</td><td>1,840*</td><td>1805</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr><tr><td>1251</td><td>110</td><td>2251</td><td>55</td><td>Extension for reply within first month</td><td></td></tr><tr><td>1252</td><td>420</td><td>2252</td><td>210</td><td>Extension for reply within second month</td><td></td></tr><tr><td>1253</td><td>950</td><td>2253</td><td>475</td><td>Extension for reply within third month</td><td></td></tr><tr><td>1254</td><td>1,480</td><td>2254</td><td>740</td><td>Extension for reply within fourth month</td><td></td></tr><tr><td>1255</td><td>2,010</td><td>2255</td><td>1,005</td><td>Extension for reply within fifth month</td><td></td></tr><tr><td>1401</td><td>330</td><td>2401</td><td>165</td><td>Notice of Appeal</td><td></td></tr><tr><td>1402</td><td>330</td><td>2402</td><td>165</td><td>Filing a brief in support of an appeal</td><td></td></tr><tr><td>1403</td><td>290</td><td>2403</td><td>145</td><td>Request for oral hearing</td><td></td></tr><tr><td>1451</td><td>1,510</td><td>1451</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td></td></tr><tr><td>1452</td><td>110</td><td>2452</td><td>55</td><td>Petition to revive - unavoidable</td><td></td></tr><tr><td>1453</td><td>1,330</td><td>2453</td><td>665</td><td>Petition to revive - unintentional</td><td></td></tr><tr><td>1501</td><td>1,330</td><td>2501</td><td>665</td><td>Utility issue fee (or reissue)</td><td></td></tr><tr><td>1502</td><td>480</td><td>2502</td><td>240</td><td>Design issue fee</td><td></td></tr><tr><td>1503</td><td>640</td><td>2503</td><td>320</td><td>Plant issue fee</td><td></td></tr><tr><td>1460</td><td>130</td><td>1460</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr><tr><td>1807</td><td>50</td><td>1807</td><td>50</td><td>Processing fee under 37 CFR 1.17(q)</td><td></td></tr><tr><td>1806</td><td>180</td><td>1806</td><td>180</td><td>Submission of Information Disclosure Stmt</td><td></td></tr><tr><td>8021</td><td>40</td><td>8021</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td></td></tr><tr><td>1809</td><td>770</td><td>2809</td><td>385</td><td>Filing a submission after final rejection (37 CFR 1.129(a))</td><td></td></tr><tr><td>1810</td><td>770</td><td>2810</td><td>385</td><td>For each additional invention to be examined (37 CFR 1.129(b))</td><td></td></tr><tr><td>1801</td><td>770</td><td>2801</td><td>385</td><td>Request for Continued Examination (RCE)</td><td></td></tr><tr><td>1802</td><td>900</td><td>1802</td><td>900</td><td>Request for expedited examination of a design application</td><td></td></tr><tr><td colspan="5">Other fee (specify) _____</td><td></td></tr><tr><td colspan="5" style="text-align: right;"><b>SUBTOTAL (3)</b></td><td><b>(\$)</b> 0.00</td></tr></tbody></table></div>				Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	1001	770	2001	385	Utility filing fee	770.00	1002	340	2002	170	Design filing fee		1003	530	2003	265	Plant filing fee		1004	770	2004	385	Reissue filing fee		1005	160	2005	80	Provisional filing fee		<b>SUBTOTAL (1)</b>					<b>(\$)</b> 770.00	Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	1202	18	2202	9	Claims in excess of 20		1201	86	2201	43	Independent claims in excess of 3		1203	290	2203	145	Multiple dependent claim, if not paid		1204	86	2204	43	** Reissue independent claims over original patent		1205	18	2205	9	** Reissue claims in excess of 20 and over original patent		<b>SUBTOTAL (2)</b>					<b>(\$)</b> 608.00	Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	1051	130	2051	65	Surcharge - late filing fee or oath		1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet		1053	130	1053	130	Non-English specification		1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination		1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action		1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action		1251	110	2251	55	Extension for reply within first month		1252	420	2252	210	Extension for reply within second month		1253	950	2253	475	Extension for reply within third month		1254	1,480	2254	740	Extension for reply within fourth month		1255	2,010	2255	1,005	Extension for reply within fifth month		1401	330	2401	165	Notice of Appeal		1402	330	2402	165	Filing a brief in support of an appeal		1403	290	2403	145	Request for oral hearing		1451	1,510	1451	1,510	Petition to institute a public use proceeding		1452	110	2452	55	Petition to revive - unavoidable		1453	1,330	2453	665	Petition to revive - unintentional		1501	1,330	2501	665	Utility issue fee (or reissue)		1502	480	2502	240	Design issue fee		1503	640	2503	320	Plant issue fee		1460	130	1460	130	Petitions to the Commissioner		1807	50	1807	50	Processing fee under 37 CFR 1.17(q)		1806	180	1806	180	Submission of Information Disclosure Stmt		8021	40	8021	40	Recording each patent assignment per property (times number of properties)		1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))		1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))		1801	770	2801	385	Request for Continued Examination (RCE)		1802	900	1802	900	Request for expedited examination of a design application		Other fee (specify) _____						<b>SUBTOTAL (3)</b>					<b>(\$)</b> 0.00
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1460	130	1460	130	Petitions to the Commissioner																																																																																																																																																																																																																																																																																									
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)																																																																																																																																																																																																																																																																																									
1806	180	1806	180	Submission of Information Disclosure Stmt																																																																																																																																																																																																																																																																																									
8021	40	8021	40	Recording each patent assignment per property (times number of properties)																																																																																																																																																																																																																																																																																									
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))																																																																																																																																																																																																																																																																																									
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))																																																																																																																																																																																																																																																																																									
1801	770	2801	385	Request for Continued Examination (RCE)																																																																																																																																																																																																																																																																																									
1802	900	1802	900	Request for expedited examination of a design application																																																																																																																																																																																																																																																																																									
Other fee (specify) _____																																																																																																																																																																																																																																																																																													
<b>SUBTOTAL (3)</b>					<b>(\$)</b> 0.00																																																																																																																																																																																																																																																																																								